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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,199	03/26/2001	Steven W. Meeks	20830-05727; 5727 5727 US	3968

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EXAMINER	
NGUYEN, TU T	

ART UNIT	PAPER NUMBER
2877	

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/818,199	MEEKS ET AL.	
	Examiner	Art Unit	
	Tu T. Nguyen	2877	

-- The MAILING DATE of this communication app ars on the cover she t with the correspond nc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-25 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Detailed Office Action

Claim Rejections - 35 U.S.C. § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-25 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification does not disclose a second miniature optic system for measuring the second side of the object.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a second miniature optic system for measuring the second side of the object must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al (6,134,011).

With respect to claim 1, Klein discloses a system for measuring a phase different comprising: a first light source 26 (fig 1) for transmitting a first light beam 110 (fig 1) toward a first surface 5 (fig 1) of the object, a first polarization beam splitter 140 (fig 1) for separating the first 66s (fig 1) and the second 66p (fig 1) signal component, a first detector 72s (fig 1) and the second detector 72p (fig 1), phase determinator 89 (fig 1) for determining the phase different (column 9, 40-45).

Klein does not disclose a second optic system. Since the second optic system is the same as the first system. It would have been obvious to modify Klein's system by adding a second optic system to detect both sides of the object at the same time to save the testing time. Mere duplication of the essential working parts of a device involves only routine skill in the art.

With respect to claim 2, Klein discloses a test disc 5 (fig 1) is a magnetic disk (column 7, line 66).

With respect to claim 3, Klein does not explicitly teach determining a difference between the first and second intensities to determine the effects of texture on the object. However, Klein teaches in the abstract that a plurality of characteristics of the disk can be calculated based on the intensity polarization analysis. Since the texture of the disk would have been well known reflect the characteristic of the disk and effect birefringence properties, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to determine the effects of a texture on the object using the measured intensity polarization signal of Klein. The motivation for this would have been to specifically categorize different characteristics of the disk using the same set of calculated light intensities and phase difference, this would help providing specific characteristics of the disk with simple system setup and construction.

With respect to claim 4, Klein discloses measuring the thickness of a thin film (column 2, lines 12-15). Klein does not explicitly disclose measuring the lubricant thickness as claimed. However, it would have been obvious that a lubricant thickness is considered as a thin film layer. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to use Klein's method to measure the lubricant thickness of the disc to ensure the disc has enough protection.

With respect to claim 5, refer to discussion in claim 4 above for measuring the lubricant thickness. It would have been obvious to use a second optic system to measure the lubricant thickness for both side of the object at the same time to save the testing time.

With respect to claims 6,8, Klein does not explicitly teach determining magnetic characteristic or carbon thickness of the object based on difference in phase, however, it would have been obvious to modify Klein's system to include the determining magnetic characteristic of the object. The motivation for this would have been to report specific characteristics and specification of the disk to the manufacture using the measured result of light intensity and phase different; this would help providing user several specific characteristic of the disk using a simple measuring system.

With respect to claim 7, refer to discussion in claim 6 above for measuring the carbon thickness and discussion in claim 5 for a second optic system.

With respect to claim 9, refer to discussion in claim 6 above for measuring the magnetic characteristic and discussion in claim 5 for a second optic system.

Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al (6,134,011) in view of Yamamoto (5,610,897).

With respect to claim 10, Klein does not disclose measuring the Kerr effect based upon the difference in phase. However, Yamamoto discloses the relationship between the phase difference of the S and P polarized components and the Kerr effect (column 50, lines 12-19). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include consideration of Kerr effect in Klein's method as suggested by Yamamoto in order to improve the system's accuracy.

With respect to claim 11, refer to discussion in claim 10 above for measuring the Kerr effect. It would have been obvious to use a second optic system to measure the Kerr effect for both sides of the object at the same time to save the testing time.

Claims 12-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al (6,134,011) in view of Yamamoto (5,610,897) and further view of Singhal et al (5,985,680).

With respect to claims 12,17, Klein does not disclose determining a defect and marking the defect. However, Singhal discloses a method for determining the defect (column 1, lines 16, lines 23-26) and marking the defect (column 1, lines 65-66). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine Singhal method for marking defect to Klein's method in order to report the user the exact location where the defect is found. This would help simplifying the procedure to locate the error location.

With respect to claims 13,18 refer to discussion in claim 12 for detecting the defect and refer to discussion in claim 11 for the second optic system.

With respect to claims 14,16,19,21, Klein does not disclose the claimed marking steps. However, Singhal disclose a method for marking the defect by moving and positioning a mechanical scribe to a defect position (column 3, lines 10-12); marking the location with the

scribe (column 3, lines 9-10). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine Singhal method for marking defect to Klein's method in order to report the user the exact location where the defect is found. This would help simplifying the procedure to locate the error location.

With respect to claims 15,20 Singhal does not disclose a second mechanical scribe. Since the second mechanical scribe is the same as the first system. It would have been obvious to modify Singhal's system by adding a second mechanical scribe to mark two different defect on the surface at the same time to time. Mere duplication of the essential working parts of a device involves only routine skill in the art.

With respect to claims 22-25, Klein does not explicitly disclose the components are orthogonally or non-orthogonally polarized. However, it would have been obvious a design choice to measure the orthogonally or non-orthogonally polarized components to determine different characteristics of the sample.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T Nguyen whose telephone number is (703) 306-9185. The examiner can normally be reached on M-T 7:30-5:30.
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G Font can be reached on (703) 308-4881. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Tu T. Nguyen
Primary Examiner
Group Art Unit 2877
9/26/03